

Amendments to the Claims

1. (Currently Amended) An isolated DNA that encodes a guanosine triphosphate-binding protein-coupled receptor, wherein said DNA is selected from the group consisting of:

(a) an isolated DNA encoding a protein comprising an amino acid sequence of SEQ ID ~~NO 20~~~~NOs: 1, 2, 3, 4, 17, 18, 19, 20, or 21~~;

(b) an isolated DNA comprising a coding region of a nucleotide sequence of ~~any one of~~ SEQ ID ~~NO 25~~~~NOs: 5 to 8 and 22 to 26~~;

(c) an isolated DNA encoding a protein comprising the amino acid sequence of SEQ ID ~~NO 20~~~~NOs: 1, 2, 3, 4, 17, 18, 19, 20, or 21~~ in which 10% or less of the entire ~~one or more~~ amino acids are substituted, deleted, added, and/or inserted; and

(d) an isolated DNA hybridizing under stringent conditions to the DNA comprising the nucleotide sequence of SEQ ID ~~NO 25~~~~NOs: 5, 6, 7, 8, 22, 23, 24, 25, or 26~~.

2. (Currently Amended) An isolated DNA encoding a partial peptide of a protein comprising an amino acid sequence of SEQ ID ~~NO 20~~~~NOs: 1, 2, 3, 4, 17, 18, 19, 20, or 21~~.

3. (Previously Presented) A vector comprising the DNA of claim 1.

4. (Previously Presented) A transformant comprising the DNA of claim 1.

5. (Previously Presented) A protein or a peptide encoded by the DNA of claim 1.

6. (Previously Presented) A method for producing a protein or a peptide encoded by the DNA of claim 1, comprising culturing a transformant comprising the DNA of claim 1, and recovering an expressed protein or peptide from the transformant or culture supernatant thereof.

7. (Withdrawn) A method of screening for ligands that bind to the protein of claim 5, comprising:

(a) contacting a test sample including one or more compounds with the protein or the peptide of claim 5; and

(b) selecting the one or more compounds that bind to the protein or peptide, wherein the compounds are ligands of the protein of claim 5.

8. (Withdrawn) A method of screening for compounds that have an activity of inhibiting binding between the protein of claim 5 and a ligand thereof, comprising:

(a) contacting the protein of claim 5 or a partial peptide thereof with the ligand in the presence of a test sample that includes one or more compounds and detecting a binding activity of the protein or partial peptide with the ligand; and

(b) selecting the one or more compounds that reduce the binding activity detected in step (a) as compared with a binding activity detected in the absence of the test sample.

9. (Withdrawn) A method of screening for compounds that suppress or enhance the activity of the protein of claim 5 to transduce a signal into a cell *via* the activation of the G protein of claim 5, comprising:

(a) contacting a ligand of the protein of claim 5 with cells expressing the protein in the presence of a test sample including one or more compounds,

(b) detecting an alteration in the cells that results from binding of the ligand to the protein, and

(c) selecting the one or more compounds that suppress or enhance the alteration detected in step (b) as compared with an alteration detected in the cells in the absence of the test sample.

10. (Withdrawn) The method of claim 9, wherein the alteration in the cells is a change in cAMP concentration or calcium concentration.

11. (Withdrawn) An antibody binding to the protein of claim 5.

12. (Withdrawn) A compound isolated by the method of claim 7.

13. (Withdrawn) A pharmaceutical composition comprising the compound of claim 12 as an active ingredient.

14. (Withdrawn) The pharmaceutical composition of claim 13, wherein said pharmaceutical composition is formulated for the treatment of a disease selected from the group consisting of cancer, cirrhosis, and Alzheimer's disease.
15. (Original) A polynucleotide comprising at least 15 nucleotides, wherein said polynucleotide is complementary to the DNA comprising the nucleotide sequence of any one of SEQ ID NOs: 5 to 8 and 22 to 26 or a complementary strand thereof.
16. (Withdrawn) A method for diagnosing a disease selected from the group consisting of cancer, cirrhosis, and Alzheimer's disease, comprising detecting expression of the DNA of claim 1 in tissues related to the disease derived from a subject, or mutation in the DNA of claim 1 in the subject.
17. (Withdrawn) An agent for diagnosing cancer, cirrhosis, or Alzheimer's disease, wherein the agent comprises the antibody of claim 11.
18. (Previously Presented) A vector comprising the DNA of claim 2.
19. (Previously Presented) A transformant comprising the DNA of claim 2.
20. (Previously Presented) A transformant comprising the vector of claim 4.
21. (Previously Presented) A protein or a peptide encoded by the DNA of claim 2.
22. (Withdrawn) A compound isolated by the method of claim 8.
23. (Withdrawn) A compound isolated by the method of claim 9.
24. (Withdrawn) A compound isolated by the method of claim 10.

25. (Previously Presented) An agent for diagnosing a cancer, cirrhosis, or Alzheimer's disease, wherein the agent comprises the nucleotide of claim 15.

26. (Withdrawn) The method of claim 7, wherein the method is a method of screening for ligands that suppress or enhance an ability of the peptide of claim 5 to transduce a signal into a cell via activation of the peptide of claim 5.

27. (Withdrawn) The method of claim 8, wherein the method is a method of screening for ligands that suppress or enhance an ability of the peptide of claim 5 to transduce a signal into a cell via activation of the peptide of claim 5.